FIG. 1

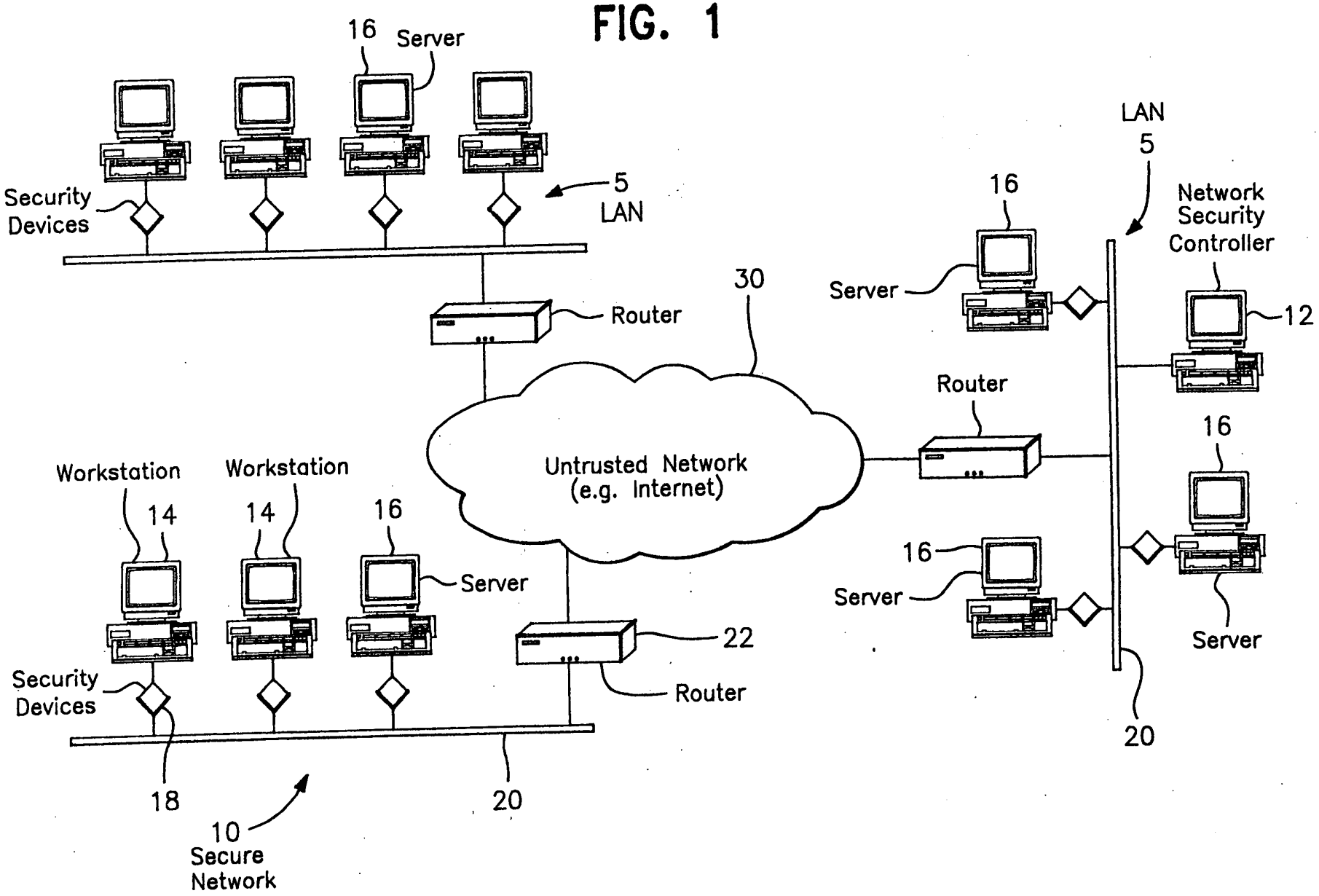
16
Server
Security
Devices
5
LAN
Router
30
Untrusted Network
(e.g. Internet)
Workstation
14
Workstation
14
16
Server
Security
Devices
22
Router
18
20
10
Secure
Network
LAN
5
16
Server
Network
Security
Controller
12
Router
16
16
Server
Server
20

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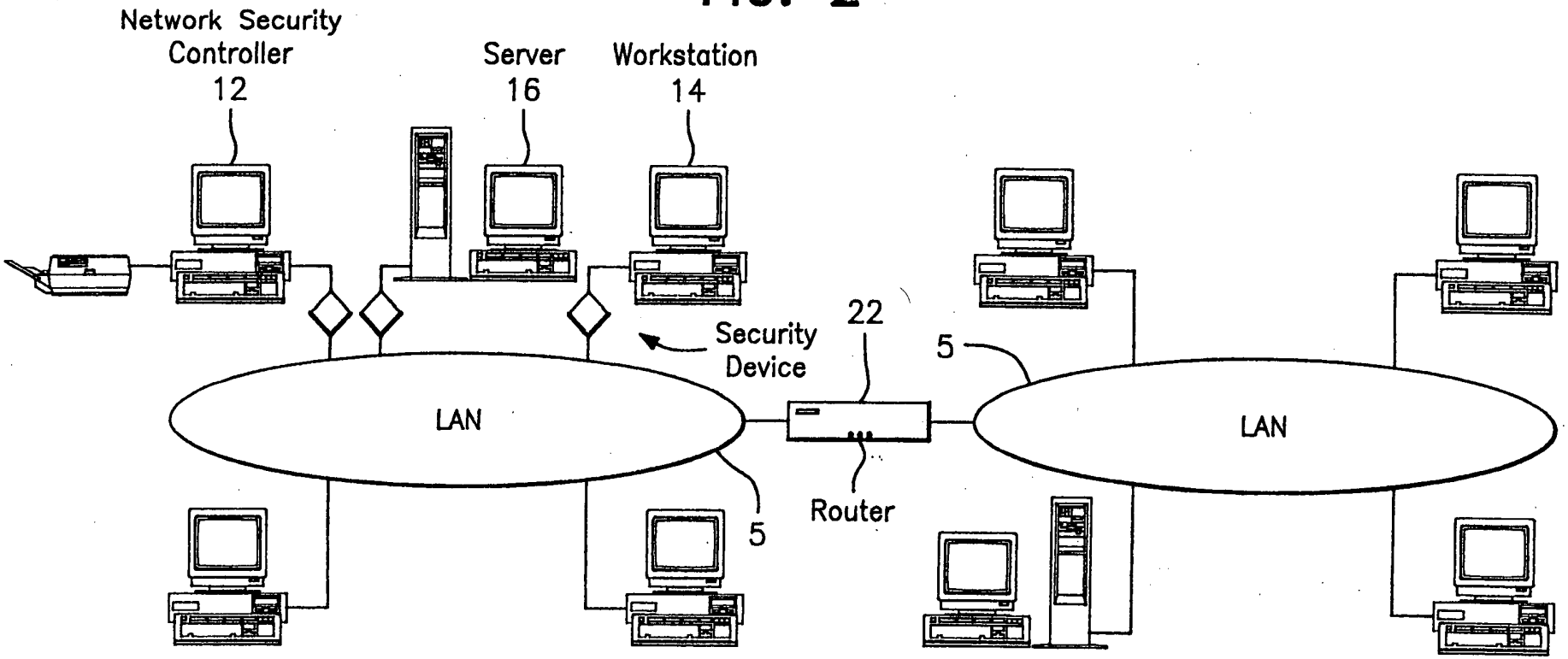
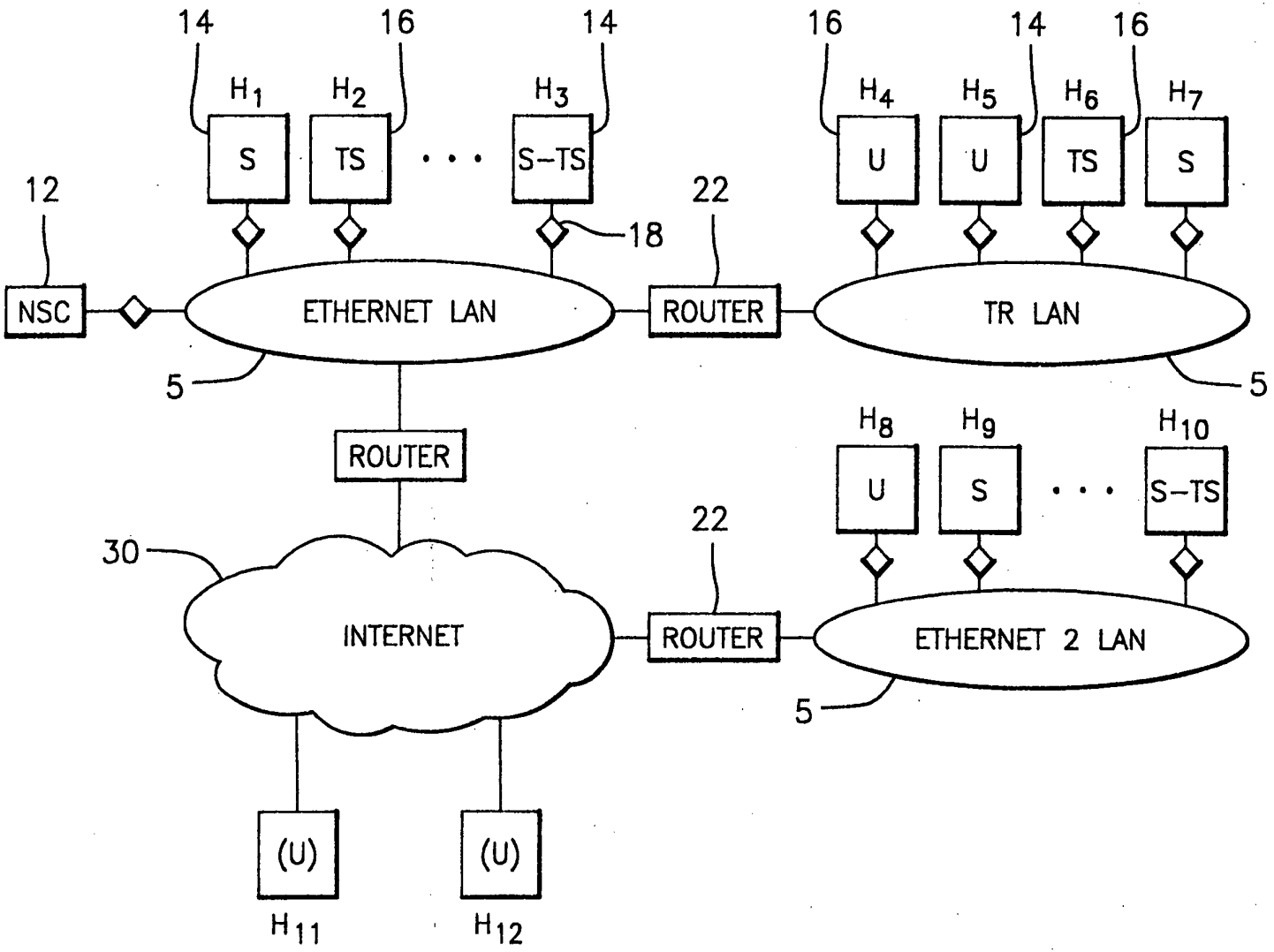
FIG. 2



TO2027 092E660

FIG. 3



TD2027 09266660

FIG. 4

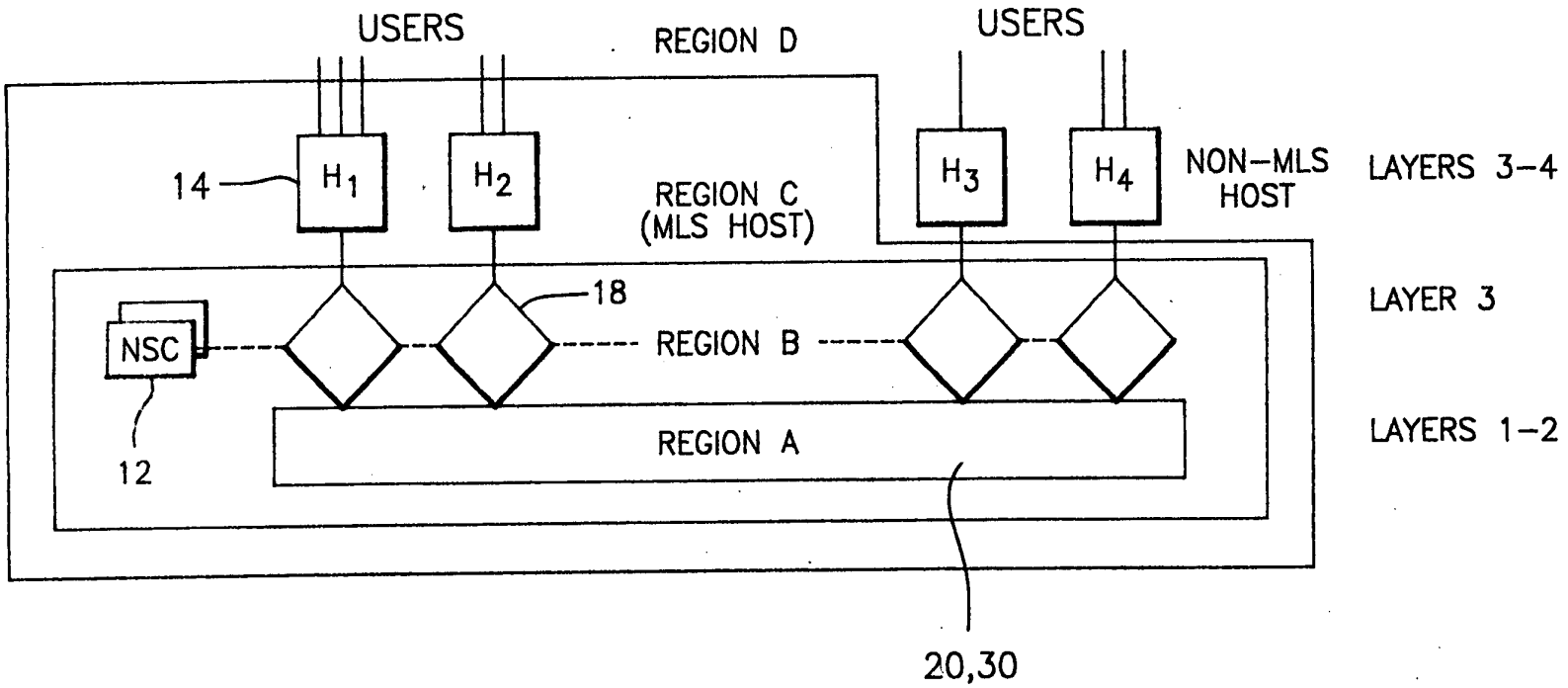
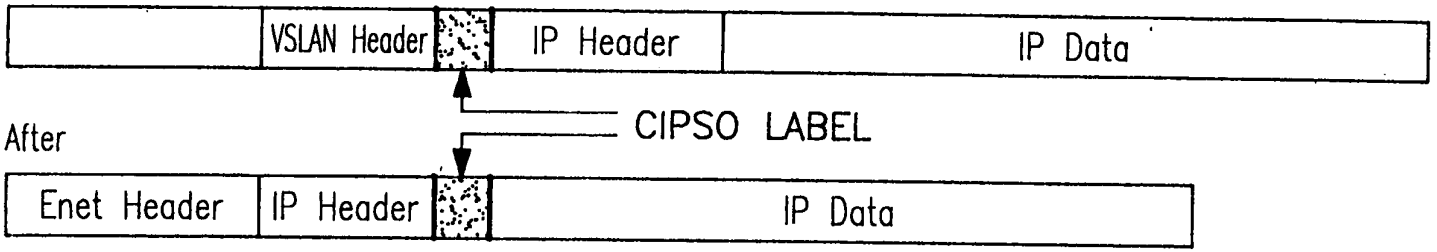


FIG. 5

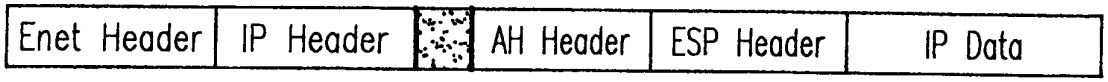
* CIPSO LABELING



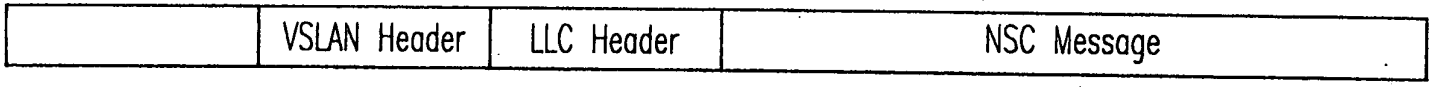
* HOST TO HOST COMMUNICATION

Travel log

Transport



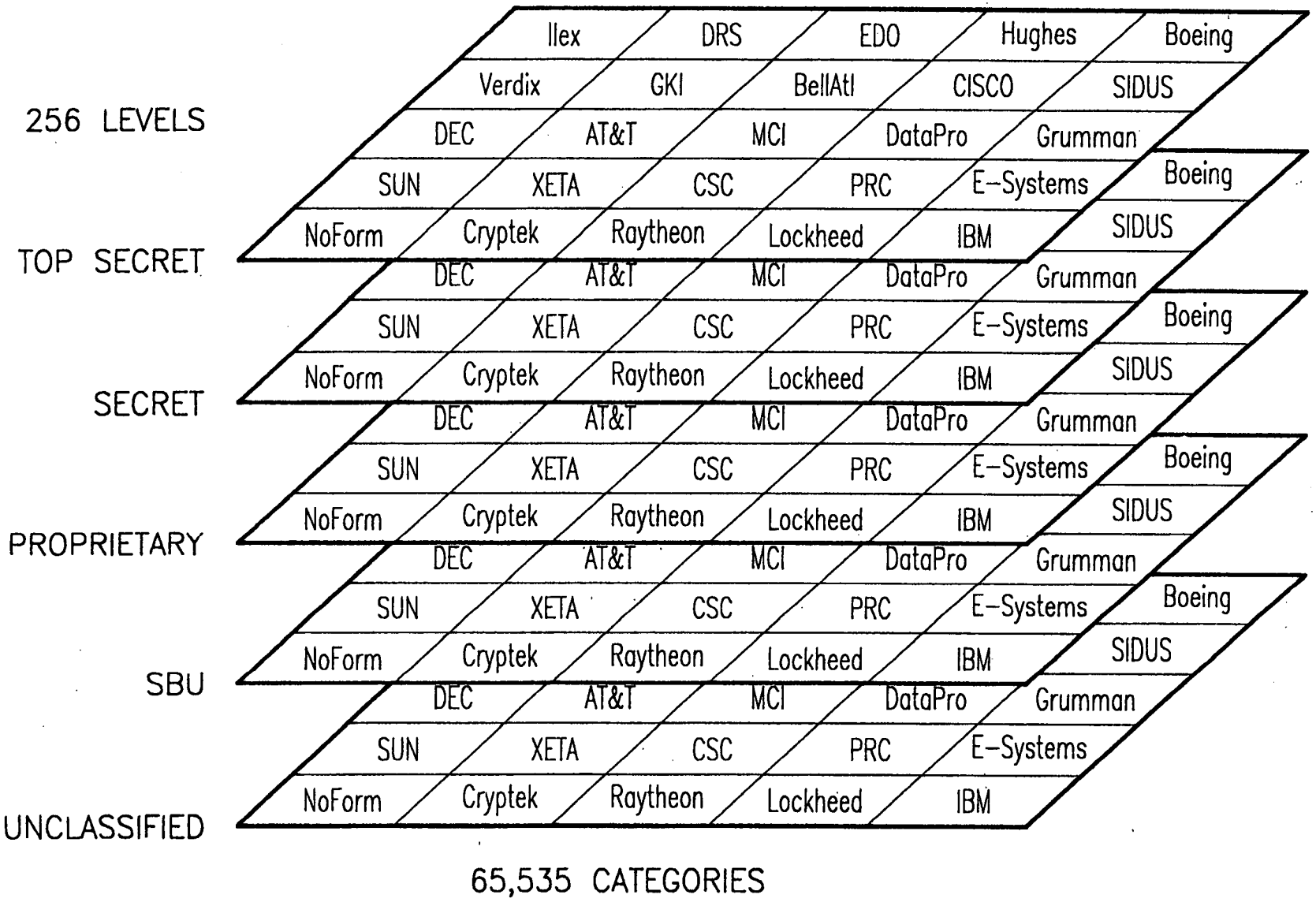
* CONTROL COMMUNICATION



After

TOP SECRET 0926660

FIG. 6



PATENT 09226660

FIG. 7

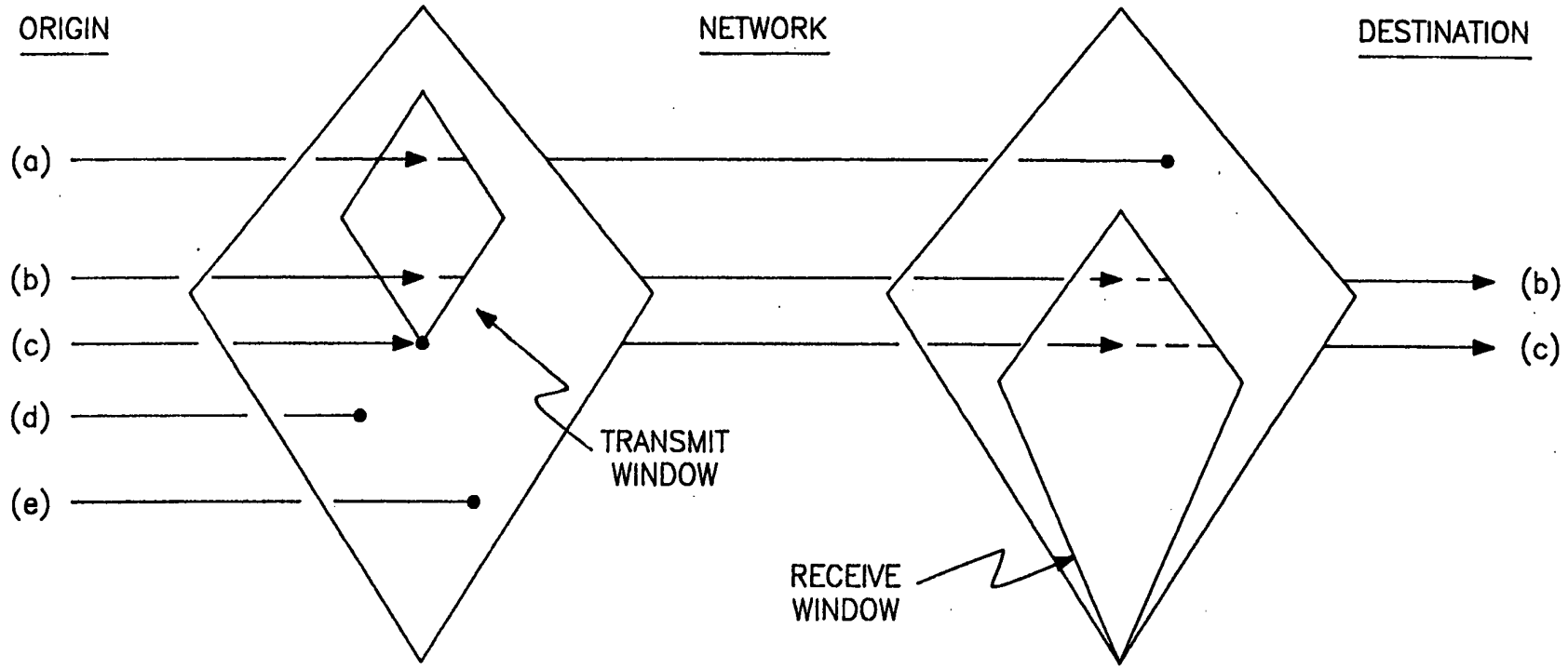


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FIG. 8

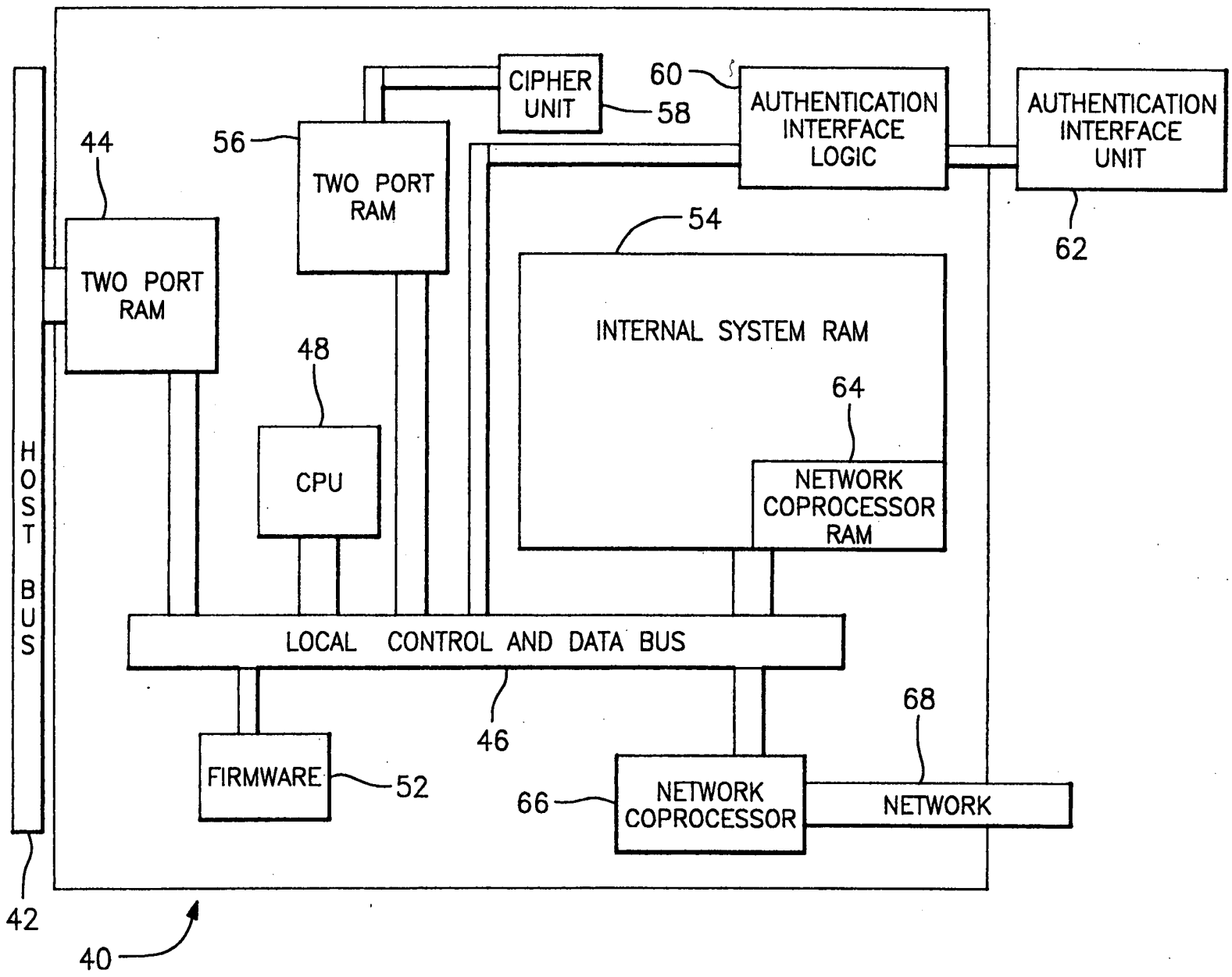

FIG. 9

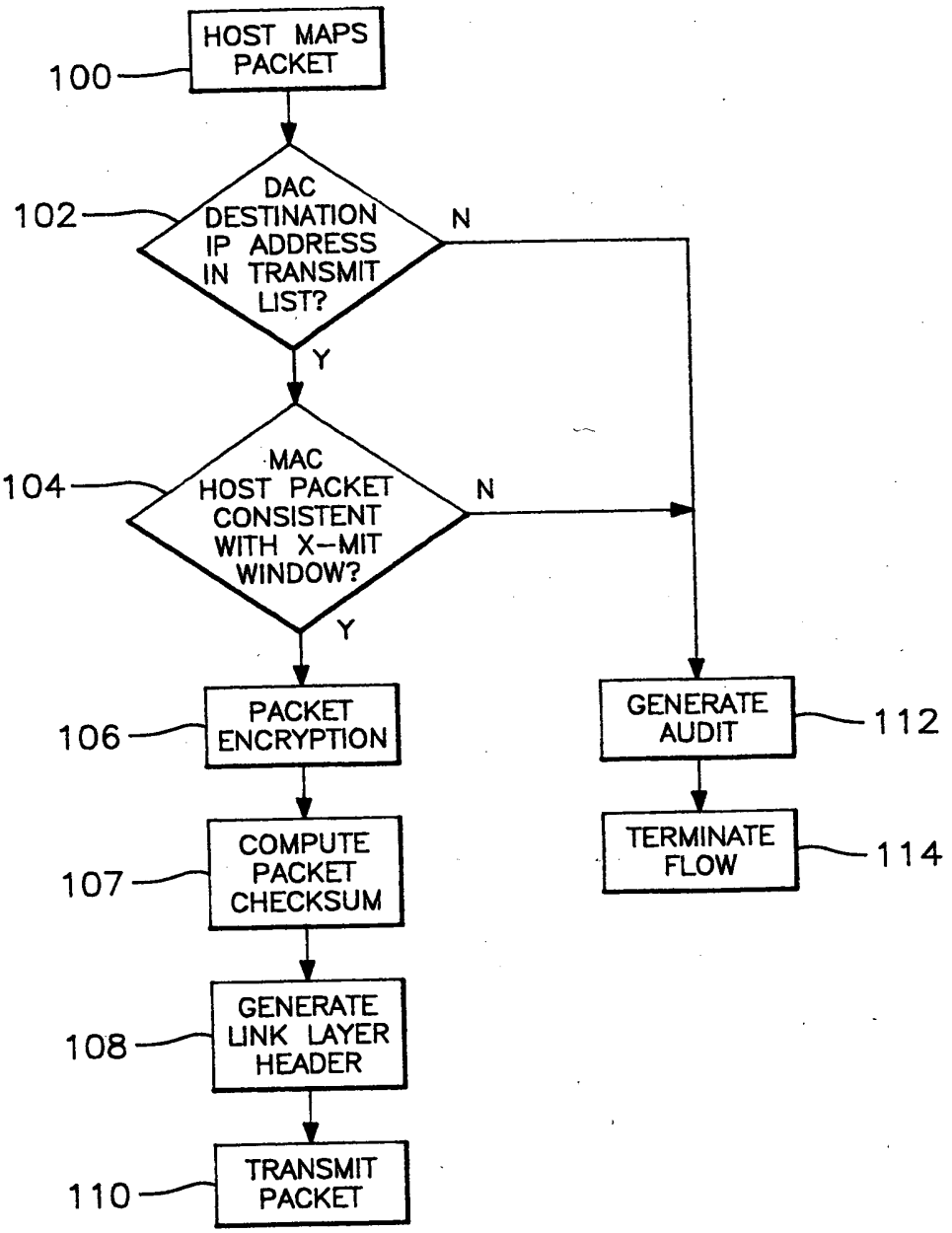
HOST MAPS PACKET
100
DAC DESTINATION IP ADDRESS IN TRANSMIT LIST?
102
N
Y
MAC HOST PACKET CONSISTENT WITH X-MIT WINDOW?
104
N
Y
PACKET ENCRYPTION
106
COMPUTE PACKET CHECKSUM
107
GENERATE LINK LAYER HEADER
108
TRANSMIT PACKET
110
GENERATE AUDIT
112
TERMINATE FLOW
114

FIG. 10

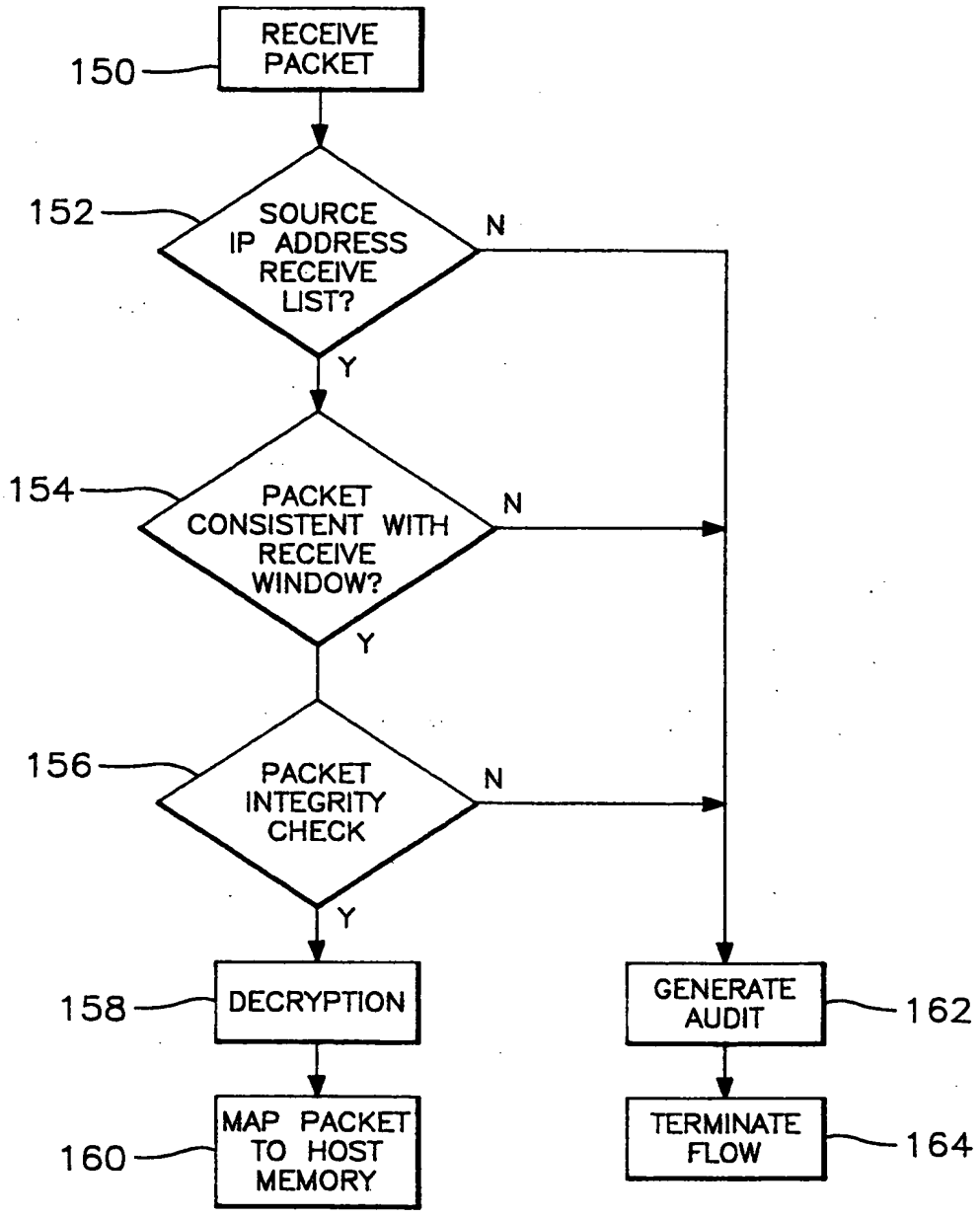
RECEIVE PACKET
150
SOURCE IP ADDRESS RECEIVE LIST?
152
N
Y
PACKET CONSISTENT WITH RECEIVE WINDOW?
154
N
Y
PACKET INTEGRITY CHECK
156
N
Y
DECRYPTION
158
MAP PACKET TO HOST MEMORY
160
GENERATE AUDIT
162
TERMINATE FLOW
164

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FIG. 11
(PRIOR ART)

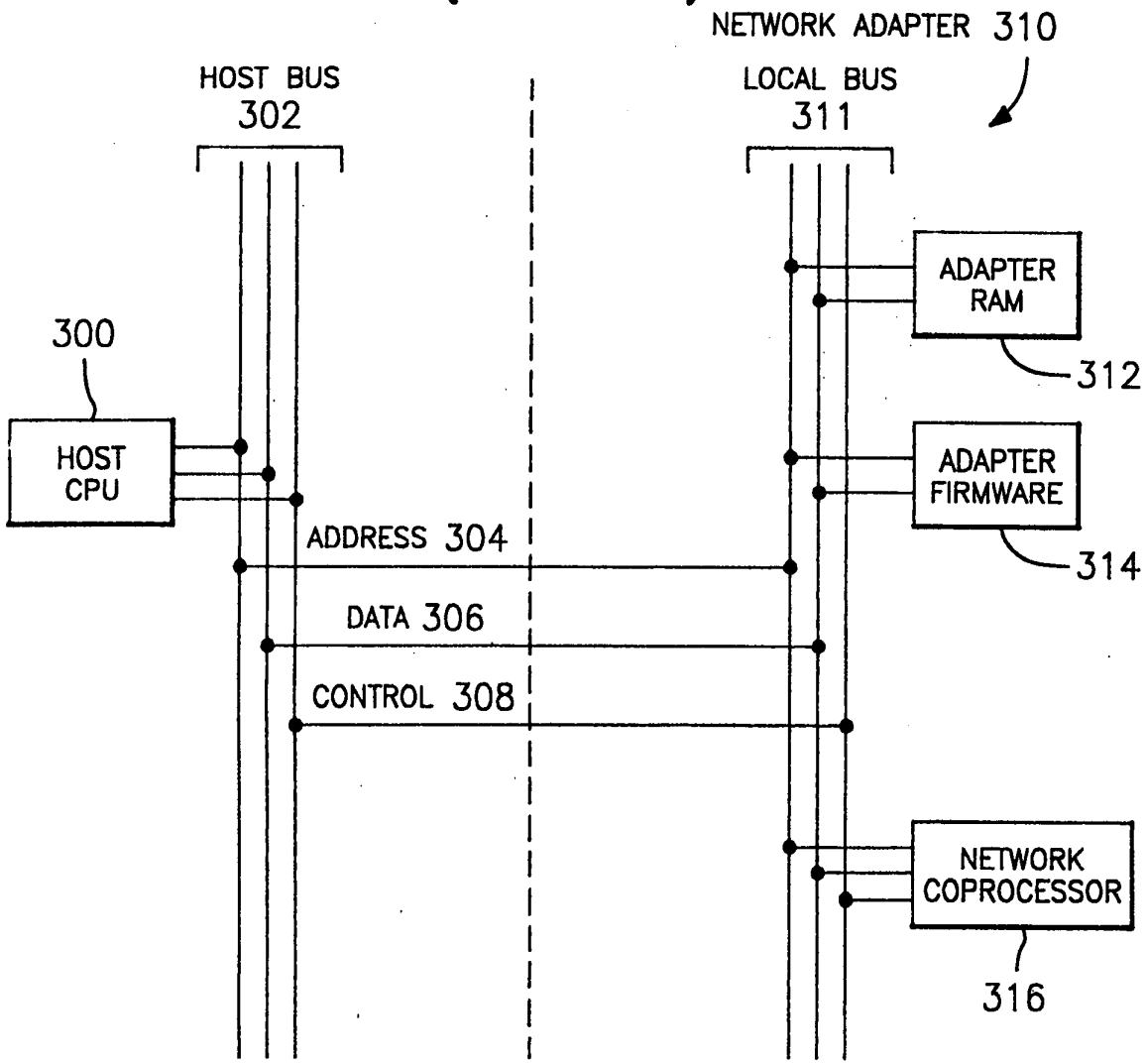


FIG. 12

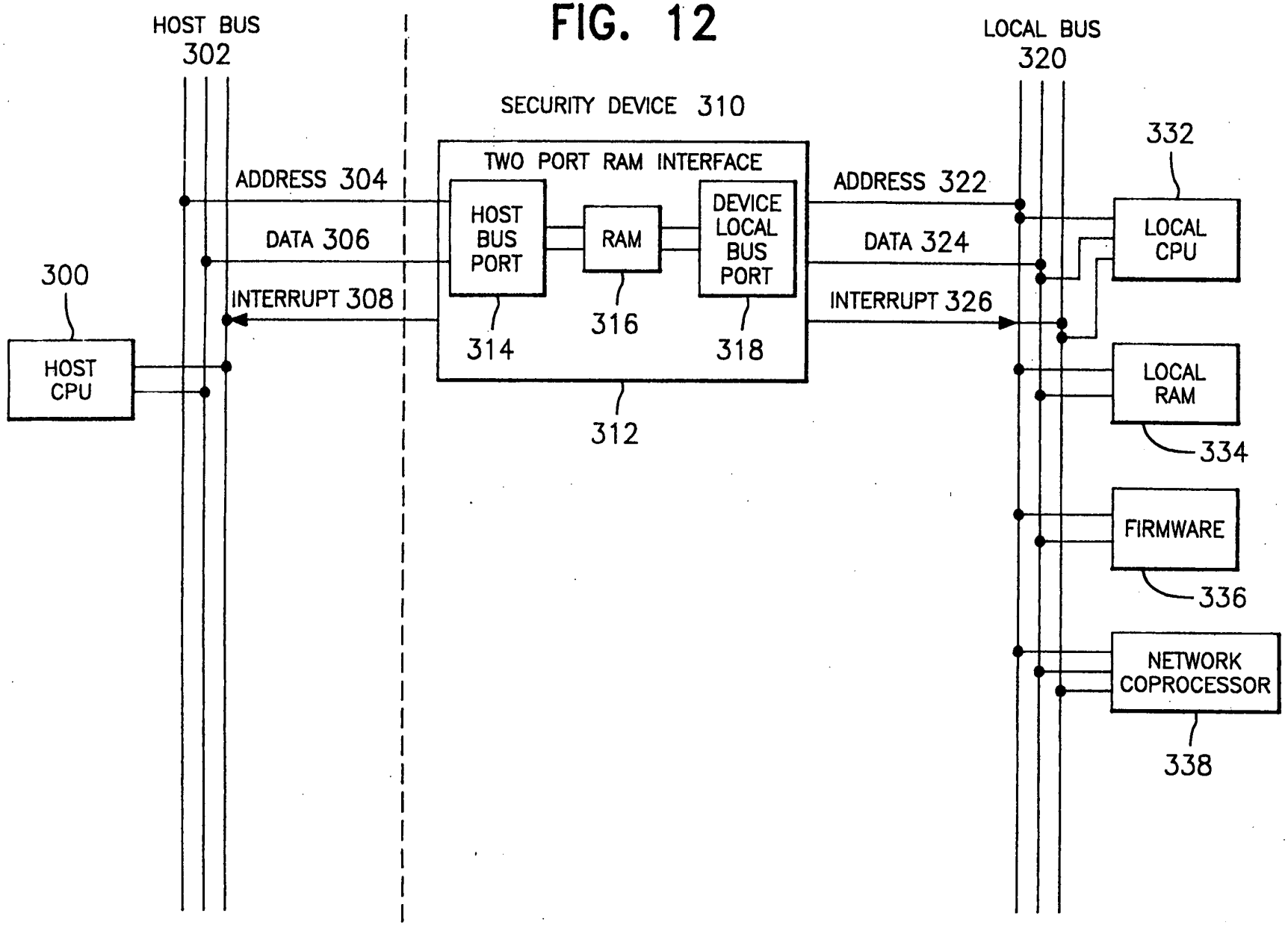
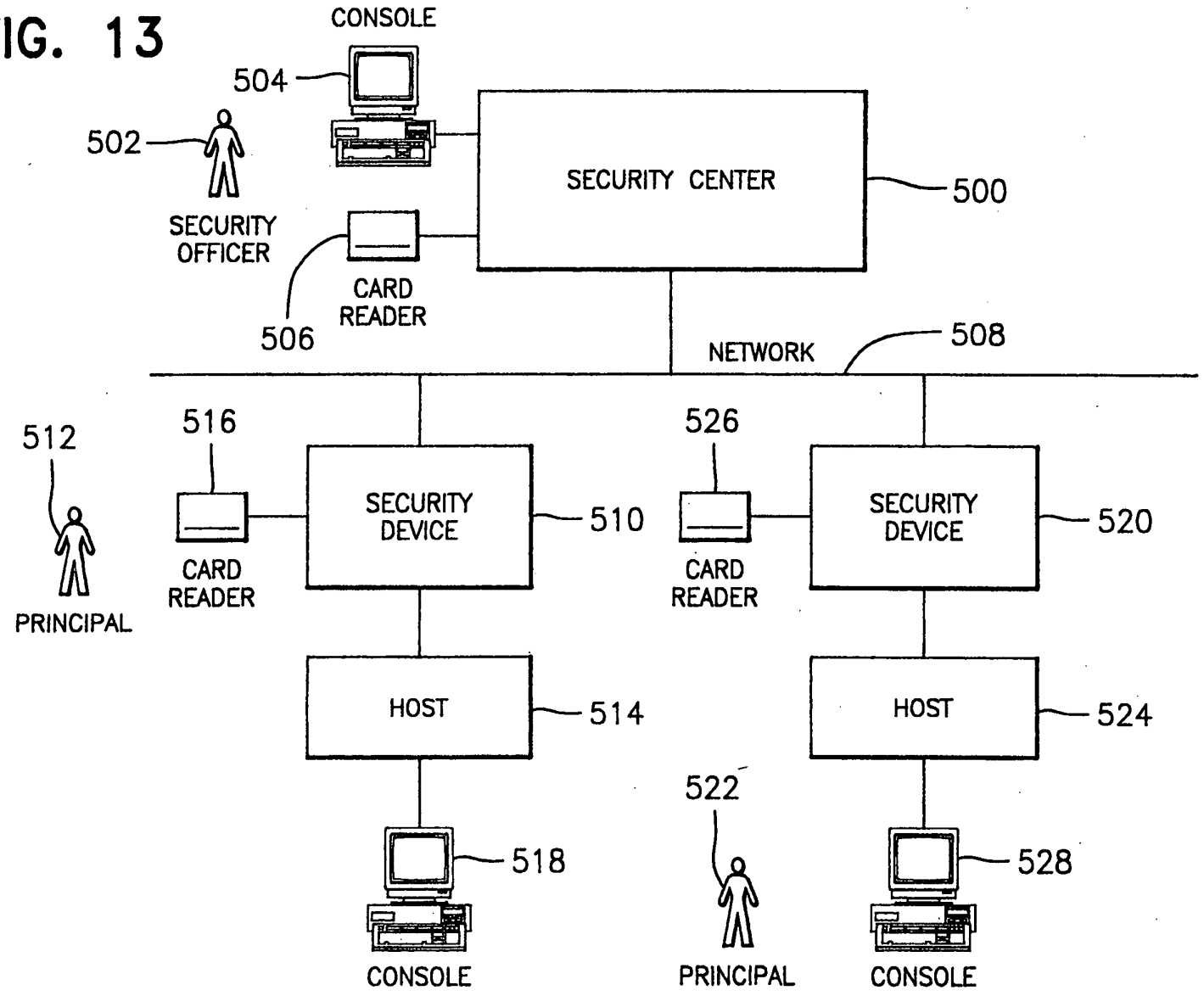

HOST BUS
302
SECURITY DEVICE 310
LOCAL BUS
320
TWO PORT RAM INTERFACE
ADDRESS 304
DATA 306
INTERRUPT 308
HOST BUS PORT
RAM
DEVICE LOCAL BUS PORT
ADDRESS 322
DATA 324
INTERRUPT 326
300
HOST CPU
314
316
318
312
332
LOCAL CPU
LOCAL RAM
334
FIRMWARE
336
NETWORK COPROCESSOR
338

FIG. 13


CONSOLE
504
502
SECURITY OFFICER
SECURITY CENTER
500
CARD READER
506
NETWORK
508
512
PRINCIPAL
516
CARD READER
SECURITY DEVICE
510
526
CARD READER
SECURITY DEVICE
520
HOST
514
HOST
524
522
PRINCIPAL
518
CONSOLE
528
CONSOLE

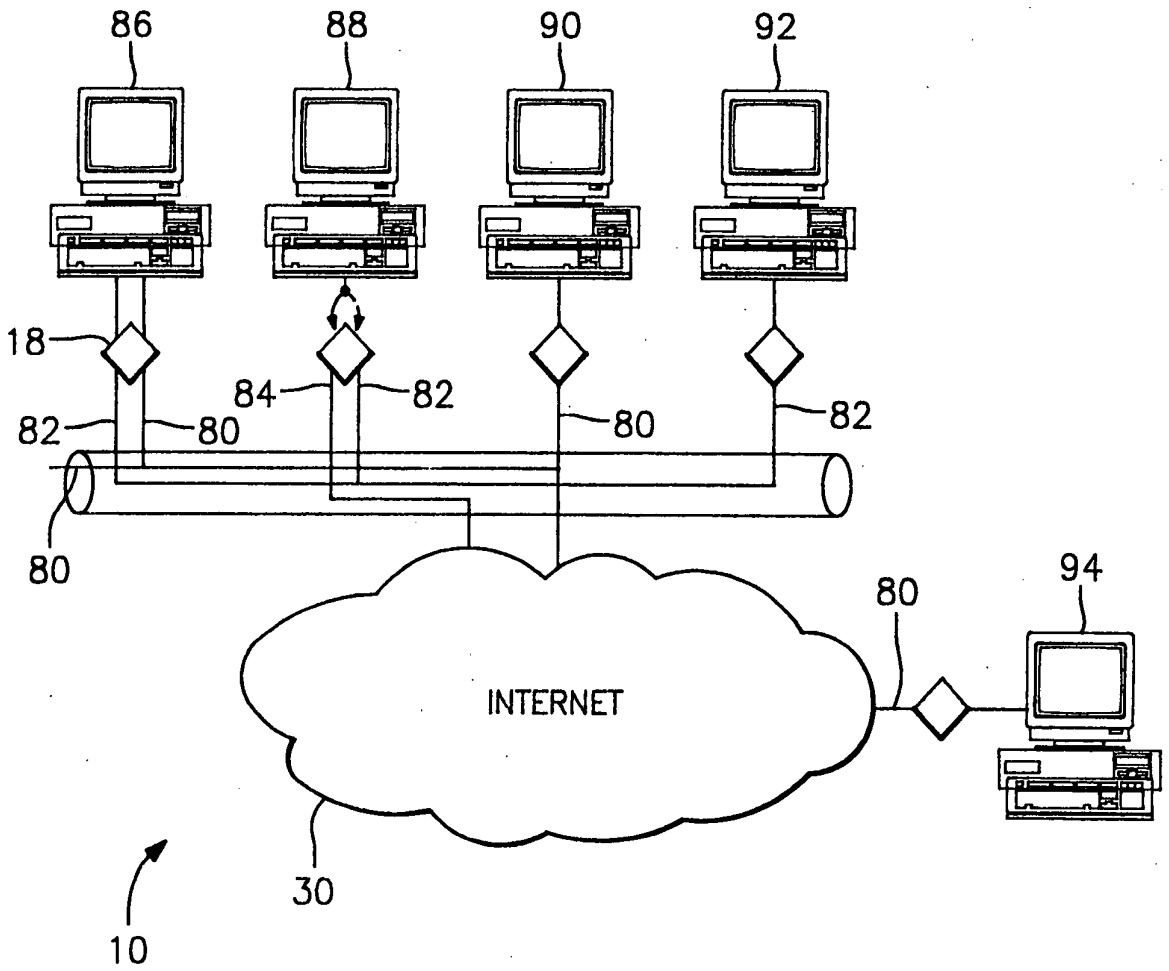



FIG. 14